D

Service Manual

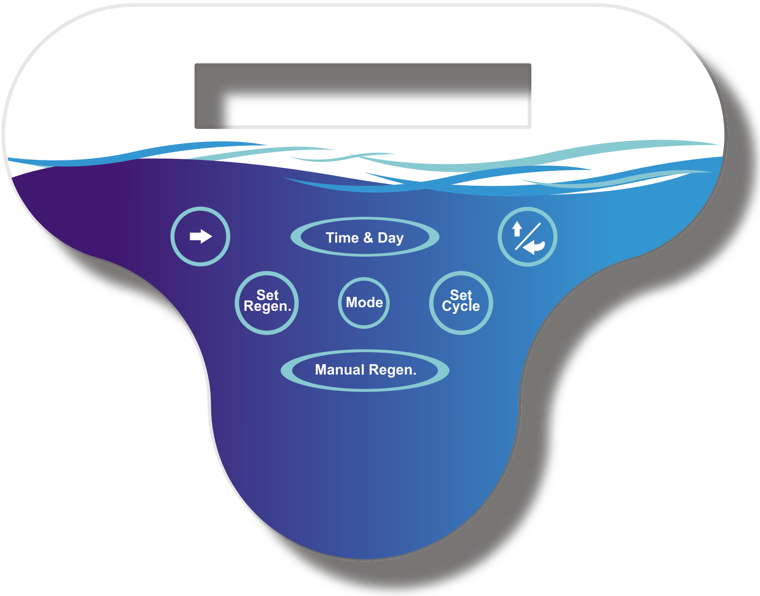


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Key Pad



Move the cursor to the parameters for change.

①Increase the value of the selected parameters.
②Confirm the selected parameters.

Time & Day Set the current time and day.

Mode Select the valve regeneration type.
There are 4 options-Timer, Meter immediate, Meter delay and Week day initiated regenerations.

Set Regen. Depending on the above MODE selected, to set the appropriate information such as the regeneration time, water capacity, etc.

Set Cycle Set the duration of Backwash, Brine Draw, Rapid Rinse, and Brine Fill.

Manual Regen. Manually initiate an immediate regeneration or a queued regeneration.

Time & Day

For example to set the valve at: 2 : 30 AM WED

Time & Day — Flashing: 12:00 PM / MON TUE WED THU FRI SAT SUN — Default setting

Flashing: 02:00 AM SUN / MON TUE WED THU FRI SAT SUN — Increase the number to "02:00" AM and PM will automatically change according to the hours changing

Flashing: 02:00 AM SUN / MON TUE WED THU FRI SAT SUN — Move the cursor

Flashing: 02:30 AM SUN / MON TUE WED THU FRI SAT SUN — Increase the number to "30"

02:30 AM SUN / MON TUE WED THU FRI SAT SUN (Flashing) — Move the cursor

02:30 AM SUN / MON TUE WED THU FRI SAT SUN (Flashing) — Once confirm the set,the cursor will automatically jump to the next

Time & Day — Save & Exit. Please don't forget to press again this button. Otherwise the program will not exit to the main menu.

If you do not press the button within 5 minutes, the changes made will not be saved to memory. The display will return to service position.

MODE

For example to set the valve in: Meter Imm. Unit: M^3

Button	Display	Description
Mode	Time (Flashing) / Meter Imm. / Week / Meter Delay	Default setting
→	Time / Meter Imm. (Flashing) / Week / Meter Delay	Move the cursor
↑/↓	M^3 (Flashing) / GAL / L	Default setting
↑/↓	M^3 / GAL (Flashing) / L	Once confirm the set,the cursor will automatically jump to the next
Mode		Save & Exit. Please don't forget to press again this button. Otherwise the program will not exit to the main menu. If you do not press the button within 5 minutes,the changes made will not be saved.Then the display will return to service position

Display	Description
Review Day Override Once MODE Change!	Display returns to service position after 7 seconds. or press any button

Note:

Valve ″MODE″ always set piror to ″SET REGEN.″ Once change the ″MODE″ setting, Please review and change the contents inside "SET REGEN" accordingly

SET REGEN.(TIME MODE)

For example to set the regeneration at: 02 : 30 AM Day Override: 05

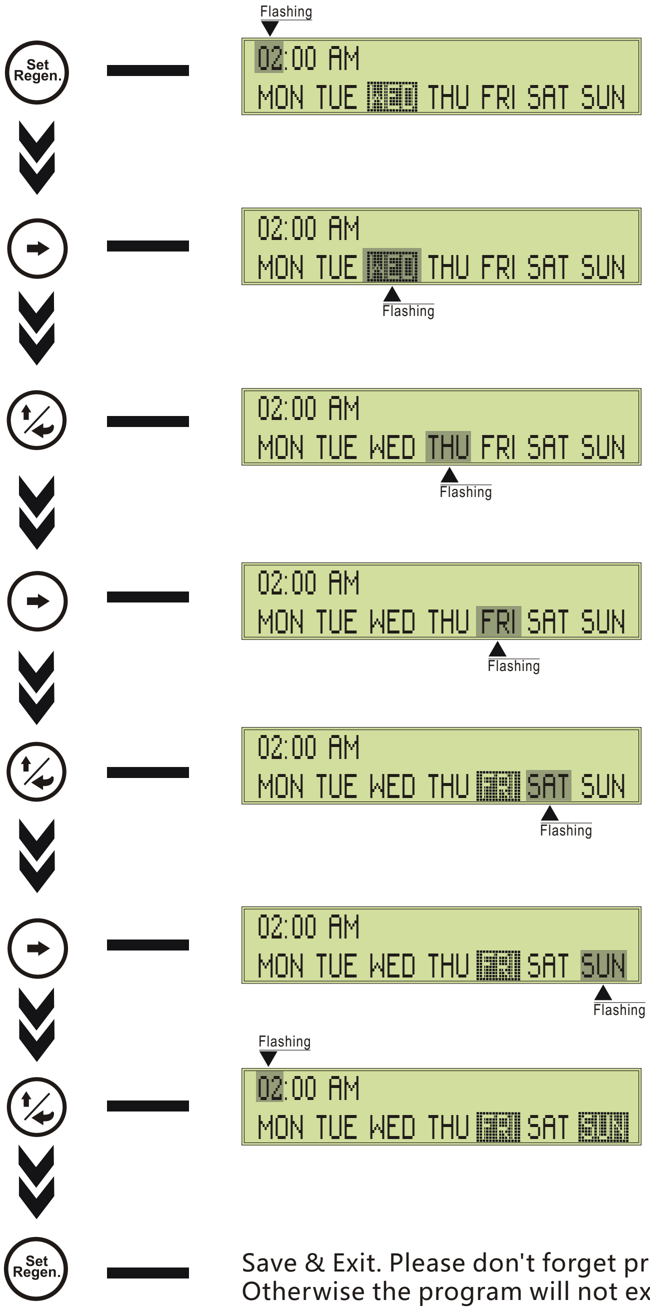
1. Set Regen. — Display (Flashing: 02): "02:00 AM / Day Override 03" — Default setting
2. → — Display (Flashing: 00): "02:00 AM / Day Override 03" — Move the cursor
3. ↑/↓ — Display (Flashing: 30): "02:30 AM / Day Override 03" — Increase the number to "30"
4. → — Display (Flashing: 03): "02:30 AM / Day Override 03" — Move the cursor
5. ↑/↓ — Display (Flashing: 05): "02:00 AM / Day Override 05" — Increase the number to "5"
6. Set Regen. — Save & Exit. Please don't forget to press again this button. Otherwise the program will not exit to the main menu.

If you do not press the button within 5 minutes, the changes made will not be saved to memory. The display will return to service position.

Master Programming

SET REGEN.(WEEK MODE)

For example to set valve regeneration at: 02 : 00 AM FRI & SUN



- Default setting
- Move the cursor
- Cancel the default setting "WED" Cursor will automatically jump to the next
- Move the cursor
- Confirm the set,the cursor will automatically jump to the next
- Move the cursor
- Confirm the set,the cursor will automatically jump to the next
- Save & Exit. Please don't forget press again this button. Otherwise the program will not exit to the main menu.

If you do not press the button within 5 minutes, the changes made will not be saved to memory. The display will return to service position.

Master Programming

SET REGEN.(METER IMM & METER DELAYED MODE)

For example, to set the valve under 1600 L Capacity, Regeneration time 02:30 AM and Regeneration override day 6.

> **NOTE:**
> When meter Valve activated the Regeneration Override Day function, the valve will then be force to regenerate at the time whenever the set time or capacity reached first.

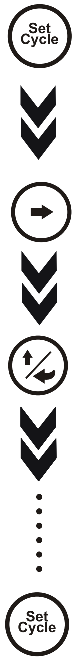
Button	Display	Action
	Flashing 02:00 AM Day:OFF Capacity 00001600 L	Move the cursor to set the regeneration time
	Flashing 02:30 AM Day:OFF Capacity 00001600 L	Increase the number to "30"
	Flashing 02:30 AM Day:OFF Capacity 00001600 L	Move the cursor to check whether activate the Regeneration Day Override function. If NOT, just skip and move the cursor to the next position.
	Flashing 02:30 AM Day:06 Capacity 00001600 L	To activate the Regeneration Day Override function by just press the button. Then increase the number to "06"

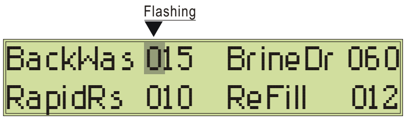
To CANCEL it ,increase the number to "99" ,then the next is "OFF"

Button	Display	Action
	02:30 AM Day:06 Capacity 00001600 L Flashing	Move the cursor to set the Capacity
	02:30 AM Day:06 Capacity 00001000 L Flashing	Increase the number to "0"
Set Regen.		SAVE & EXIT. Please don't forget to press this button, otherwise the program will not return to the main menu.

If do not pressure any button within 5 minutes, the changes made will not be saved and the display will automatically return to the service position.

SET CYCLE.





Default setting
every cycle time can be set to “000” as requested

Move the cursor

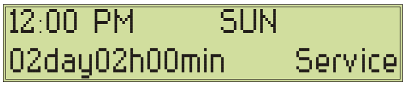
Increase the number

Save & Exit. Please don't forget to press again this button.
Otherwise the program can not exit to the main menu.

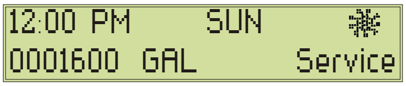
If you do not press the button within 5 minutes, the changes made will not be saved to memory.
The display will return to service position.

Product Features

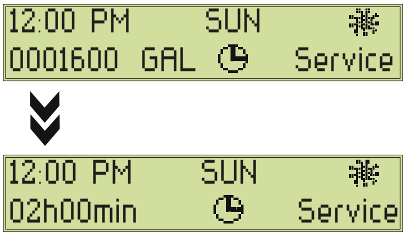
1. Full & clearly display in the Service position



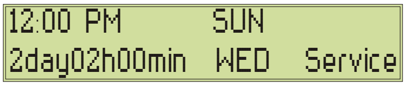
Timed Regeneration mode
The Display will show the current time, Day of the week, and remaining time to the next set regeneration.



Meter Immediate Regeneration mode
The Display will show the current time, Day of the week, and the remaining treated water to the next regeneration.



Meter Delay Regeneration mode
The Display will show the current time, Day of the week and the remaining treated water. When the remaining treated water counts down to zero, the display changes to show the remaining time to the next set regeneration.



Weekly Regeneration mode
The Display will show the current time, Day of the week, and the remaining time to the next set regeneration, and the day of the next regeneration.

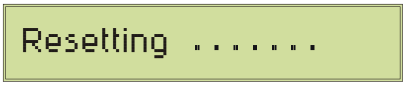
2. Automatic Key pad lock

If the key pad is not used for 3 minutes, the keyboard will be locked. To release, press any key to illuminate the screen then press buttons as shown.



3. Memory during power failure

- All program settings are stored in permanent memory. Current valve position, cycle step elapsed, time of day are stored during the power failure. Reset of current time is necessity when power up
.
- If the valve stopped at a regeneration stage when power failure, the valve will return to the prior position when power up. It takes 4 to 5 minutes to reset to the position.



Product Features

4. Restore factory settings

Press and hold the button "Manual Regen." , then power up the valve,the display shows:

```
  Factory settings
have been Restored!
```

Release the button "Manual Regen." ,then the valve will restore to the factory default settings.

5. Fault alarm

The system will automatic detect errors, if system errors are found, the display shows:

```
   System Err
 Please reset!
```

In this state, Please cut off the power supply, and then re-apply the power, if the errors are removed the valve will either stop in service position or reset, If errors persists, contact your local supplier for more assistance.

6. No hard water bypass

D series valves is designed with the option of no hard water bypass piston, which is ensured of free hard water out of the outlet in the process of regeneration.

7. Manual regeneration

- **Queueing a Regeneration**

When the valve is in service position,Press the button "Manual Regen." ,The "Que.Reg." Icon will appear to indicate that a regeneration is queued.To cancel a queued regeneration,press the button "Manual Regen." Again.

Queueing a Regeneration means the system will initiate a regeneration at the time set at the same day. If it´s missed, the system will initiate a regeneration at the same time of the next day.

```
12:00 PM      SUN
02h00min  Que.Reg   Service
```

In the mode of TIME or WEEK, The display shows for the Queued Regeneration.

```
12:00 PM      SUN       ❋
02h00min  Que.Reg   Service
```

In the mode of METER DELAY ,The display shows for the Queued Regeneration.

```
12:00 PM      SUN       ❋
0001600  GAL        Service
```

Alternating display

```
12:00 PM      SUN       ❋
02h00min  Que.Reg   Service
```

In the mode of METER IMMEDIATE ,The display shows for the Queued Regeneration.

The system will initiate a regeneration either the treated water remaining counts down to zero or the remaining time counts down to zero, whichever is first.

- **Regenerating Immediately**

When the valve is in service position,press and hold the button “Manual Regen.” at least 5 seconds, the valve immediately advances to the regeneration.

12:00 PM SUN
GO TO BackWash

“GO TO BackWash” Flashing

12:00 PM SUN
015 min BackWash

When the time counts down to zero or press “Manual Regen.”

12:00 PM SUN
GO TO BrineDraw

“GO TO BrineDraw” Flashing

12:00 PM SUN
060 min BrineDraw

When the time counts down to zero or press “Manual Regen.”

12:00 PM SUN
GO TO RapidRinse

“GO TO Rapid Rinse” Flashing

12:00 PM SUN
010 min RapidRinse

When the time counts down to zero or press “Manual Regen.”

12:00 PM SUN
GO TO Refill

“GO TO ReFill” Flashing

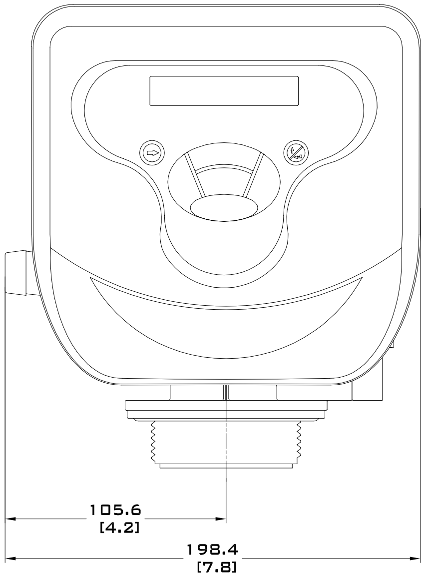
12:00 PM SUN
012 min Refill

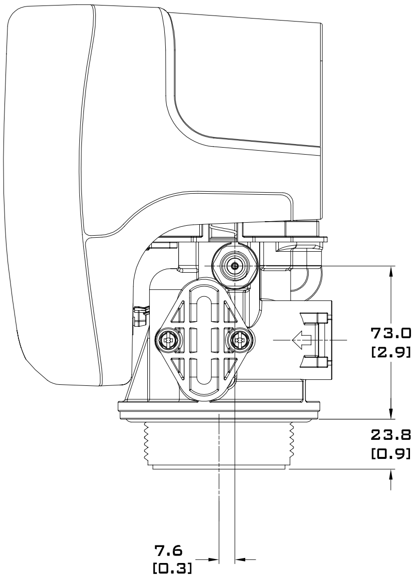
When the time counts down to zero or press “Manual Regen.”

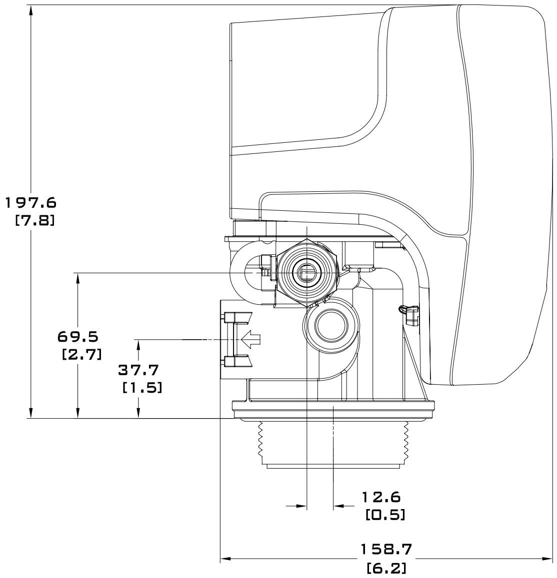
12:00 PM SUN
GO TO Service

“GO TO Service” Flashing

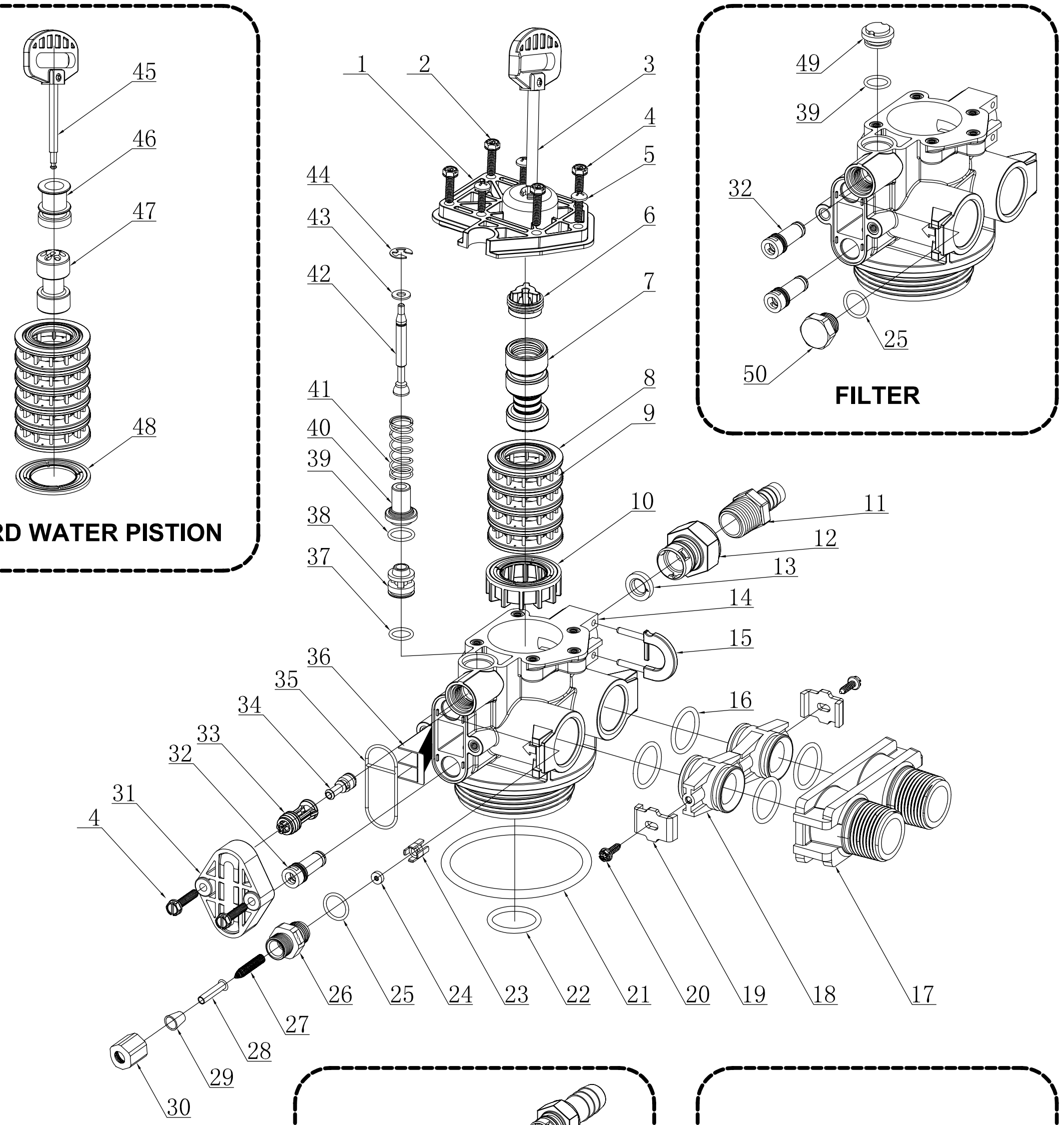
Dimensional Drawing

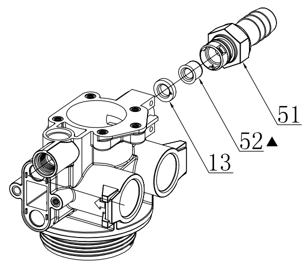




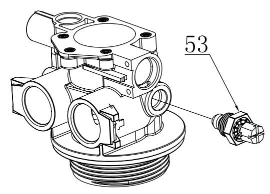


Control Drive Assembly





When D.L.F.C Button less than or equal to 7.0gpm,use the parts



MIXING ASSEMBLY

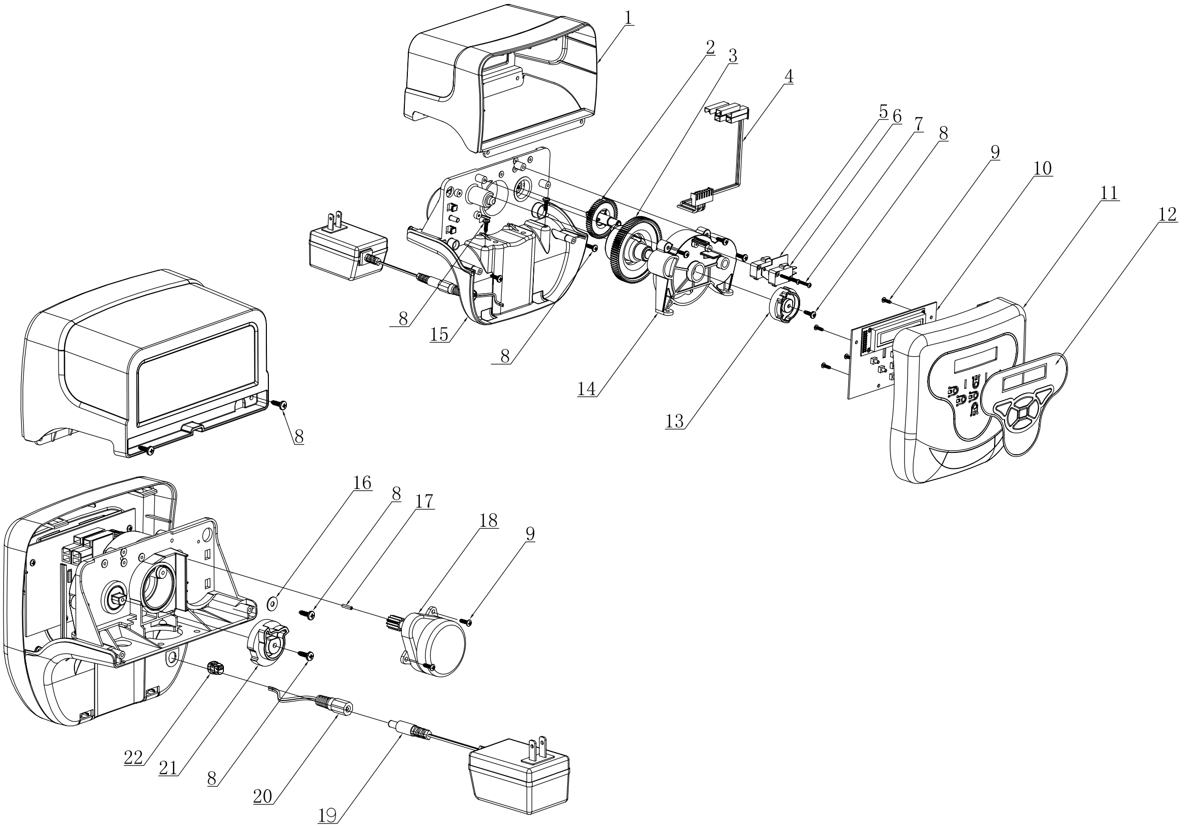
Control Drive Assembly

Item No.	Quantity	Part No.	Description
1	1	66162	End Plug Assembly
2	2	02011	Screw
3	1	66165	Piston Rod Assembly
4	4	02012	Screw
5	3	02002	Screw
6	1	56115	Piston Retainer
7	1	50045-1	Piston Softener
8	5	56033	Seal
9	4	56004	Spacer
10	1	50039	Vice Spacer
11	1	56072	Straight Drain Barb
12	1	C1025	Drainage Adapter
※13	1		D.L.F.C Button
14	1	50009-1	Valve Body
15	1	50011	Drain Hose Bolt
16	4	01013	O-Ring
※17	1		Yoke
18	2	56017	Adapter coupling
19	2	56051	Adapter Clip
20	2	02105	Screw
21	1	01007	O-Ring
22	1	01102	O-Ring
23	1	56015	B.L.F.C Button Retainer
※24	1		B.L.F.C Button
25	1	01004	O-Ring
26	1	56056	Brine Valve Connector
27	1	56060	Screen, Brine Line
28	1	56062	B.L.F.C Tube Insert
29	1	56023	B.L.F.C Ferrule
30	1	56061	B.L.F.C Fitting Nut
31	1	50001	Brine Cover
32	1	C1012	Injector Plug
※33	1		Injector nozzle
※34	1		Injector throat
35	1	50060	Middle Ring
36	1	50005	Filter
37	1	01105	O-Ring
38	1	56010	Spacer
39	1	01003	O-Ring
40	1	66119	Brine Valve Cap Assembly
41	1	56058	Spring
42	1	A1039	Brine Piston Assembly
43	1	04001	Washer
44	1	04053	Retaining Ring
45	1	C1024	Piston Rod Assembly
46	1	C1026	Piston-P Assembly
47	1	50040-1	Piston
48	1	50008	Spacer Mat
49	1	56101	B.L.F.C Plug
50	1	56102	B.L.F.C Plug
51	1	C1023	Drain Hose Barb
■52	1	50025	D.L.F.C Button Retainer
53	1	66500	Mix Water Valve Assembly

■ When D.L.F.C Button less than or equal to 7.0gpm, use the parts

※ More Model Options

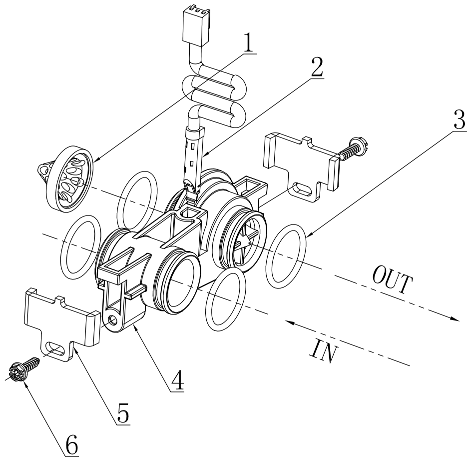
Powerhead Assembly

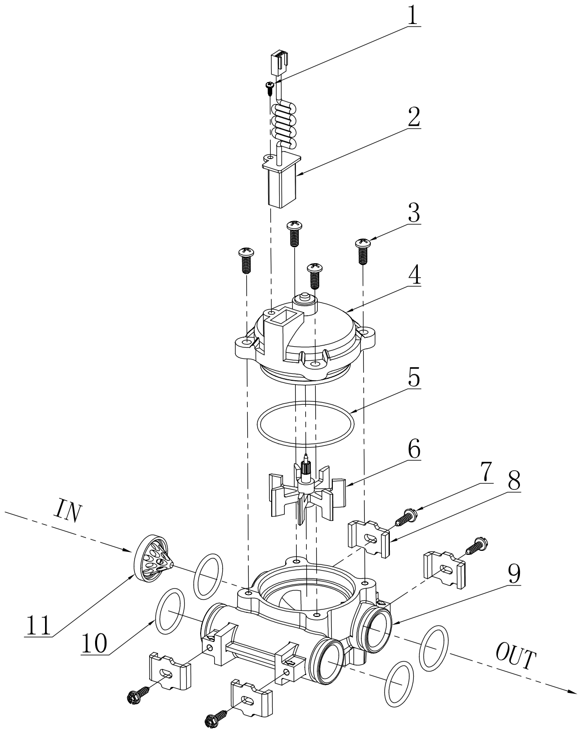


Item No.	Quantity	Part No.	Description
1	1	50023	Cover
2	1	50016	Brine Valve Gear
3	1	50015	Drive Gear
4	1	C0001	Wiring Harness
5	1	06051	Insulation
6	2	06003	Switch
7	2	02081	Screw
8	12	02106	Screw
9	6	02110	Screw
10	1	07037	Circuit Board
11	1	50014	Front Cover
12	1	50092	Label
13	1	50018	Drive Cam(No Hardwater)
		50028	Drive Cam(Hardwater)
14	1	50024	Positioning Bracket
15	1	50013	Bracket
16	1	04002	Seal
17	1	00105	Pin
18	1	13265	Motor
※19	1		Transformer
20	1	07021	DC Monotrematous Socket
21	1	50017	Brine Cam(No Hardwater)
		50027	Brine Cam(Hardwater)
22	1	07019	Strain Relief

※ More Model Options

3/4'' Electric Meter Assembly





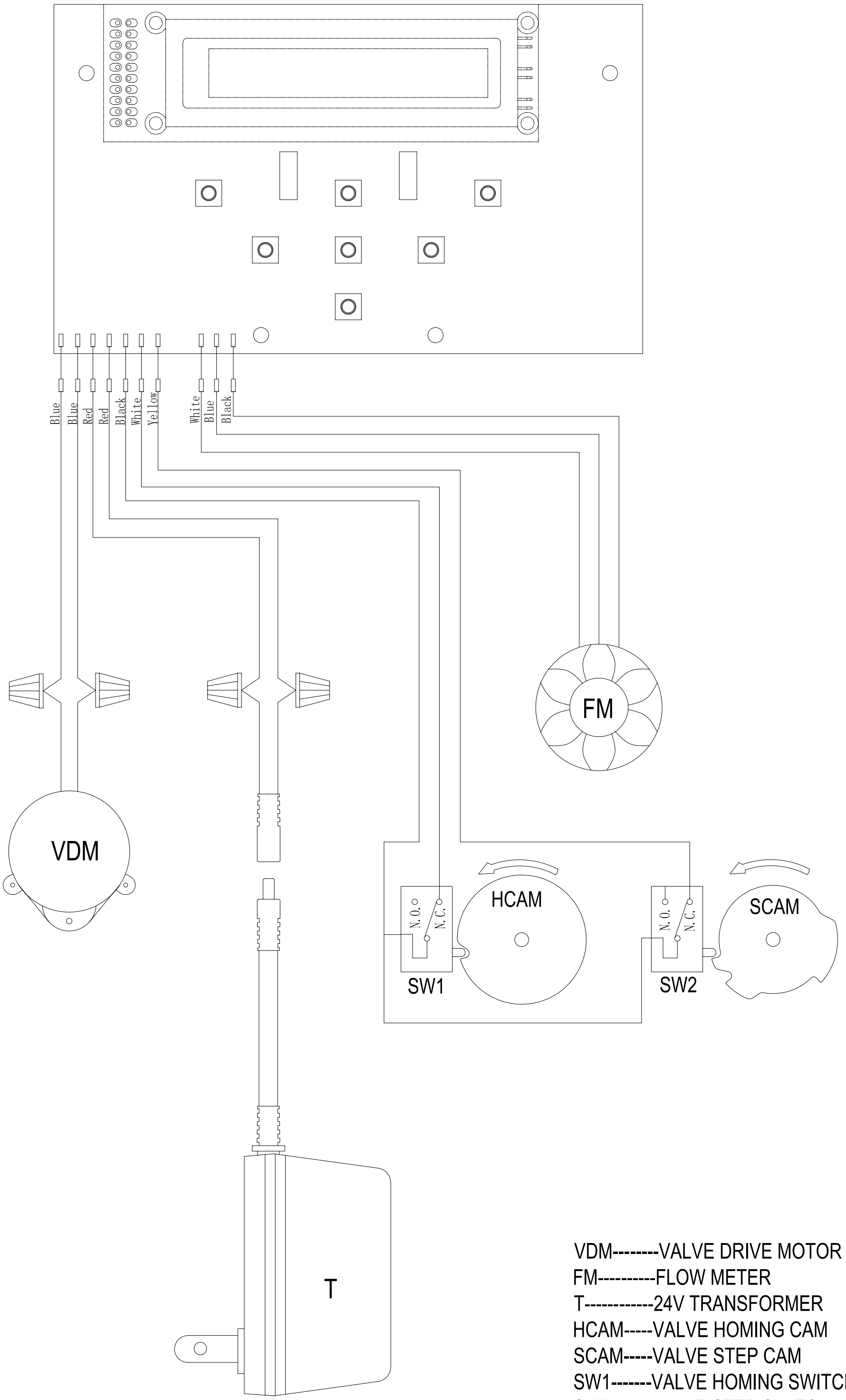
3/4 " Turbo Electric Meter Assembly Parts List

Item No.	Quantity	Part No.	Description
1	1	56013	Flow Straightener
2	1	50022-1	Meter Cable Assembly
3	4	01013	O-ring,Meter Body
4	1	1220E	Meter Body Assembly
5	2	50044	Adapter Clip
6	2	02105	Screw

3/4 " Impeller Electric Meter Assembly Parts List

ItemNo.	Quantity	Part No.	Description
1	1	02106	Screw
2	1	12333	Meter cable Assembly
3	4	02082	Screw
4	1	12332	Electric Meter Box
5	1	01014	O-ring
6	1	12204A	Impeller Assembly
7	4	02105	Screw
8	4	56051	Adapter Clip
9	1	12201	Meter Body
10	4	01013	O-ring,Meter Body
11	1	56013	Flow Straightener

Valve Wiring Diagram



VDM--------VALVE DRIVE MOTOR
FM----------FLOW METER
T------------24V TRANSFORMER
HCAM-----VALVE HOMING CAM
SCAM-----VALVE STEP CAM
SW1-------VALVE HOMING SWITCH
SW2-------VALVE STEP SWITCH

NOTES

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